

SURIKOVA, Ye.Ye.; SAVITSKIY, F.S.

Method of unbalanced volumetric compression of tempered  
steels. Zav.lab.21 no.12:1498-1501 '55. (MLRA 9:4)

1.Sverdlevskiy filial Vsesoyuznogo nauchno-issledovatel'-  
skogo instituta metrologii.  
(Steel--Testing)

SAVITSKIY, F. S.

3  
4E26

14  
✓ Rigidity of Testing Machines and Its Effect on the Falling Part of Extension and Bending Diagrams. F. S. Savitskiy and B. A. Vondrahev. (Zavodskaya Laboratoriya, 1958, 23, (6), 717-721). [In Russian]. The rigidities of seven Soviet and foreign testing machines were determined with the aid of an hydraulic mechanism and the data together with bending and tensile test results, were used to assess the effect of rigidity on the falling part of the stress-strain diagram. The rigidities of all the machines tested were found to be sufficient for correct recording of tensile diagrams even with plastic metals (such as soft steel at room temperature). Special attention was given to the further influence of crack formation in test pieces. It is recommended that testing machine rigidities should be specified by the makers.

112

SAVITSKIY, F.S.

24(0); 5(+); 6(2) PHASE I BOOK EXPLOITATION 30V/2215  
Vsesoyuznyy nauchno-issledovatel'skiy institut metrologii imeni  
D.I. Mendeleeva  
Referaty nauchno-issledovatel'skikh rabot: sbornik No. 2 (Scientific  
Research Abstracts; Collection of Articles, Nr 2) Moscow,  
Standartgiz, 1958. 139 p. 1,000 copies printed.  
Additional Sponsoring Agency: USSR. Komitet standartov, mer i  
izmeritel'nykh priborov.  
Ed.: S. V. Reshetina; Tech. Ed.: M. A. Kondrat'yeva.

FUNPOSR: These reports are intended for scientists, researchers,  
and engineers engaged in developing standards, measures, and  
gages for the various industries.

COVERAGE: The volume contains 128 reports on standards of measure-  
ment and control. The reports were prepared by scientists of  
institutes of the Komitet standartov, mer i izmeritel'nykh  
priborov pri Sovete Ministrov SSR (Commission on Standards,  
Measures, and Measuring Instruments under the USSR Council of  
Ministers). The participating institutes are: VNIM -  
Vsesoyuznyy nauchno-issledovatel'skiy institut metrologii imeni D.I.  
Mendeleeva (All-Union Scientific Research Institute of Metro-  
logy imeni D.I. Mendeleeva) in Leningrad; Sverdlovskiy  
institut Komiteta standartov, mer i izmeritel'nykh priborov  
(All-Union Scientific Research Institute of the Commission  
on Standards, Measures, and Measuring Instruments), created  
from MGIMP - Moskovskiy gosudarstvennyy institut mer i  
izmeritel'nykh priborov (Moscow State Institute of Measures  
and Measuring Instruments) October 1, 1955; VNIIFTRI -  
Vsesoyuznyy nauchno-issledovatel'skiy institut fiziko-tekhnicheskikh  
izmereniy imeni I. V. Kurchatova (All-Union Scientific  
Research Institute of Physico-Technical and Radio-engineering  
Measurements) in Moscow; MGIMP - Moskovskiy gosudarstvennyy  
institut mer i izmeritel'nykh priborov (Moscow State Institute  
of Measures and Measuring Instruments); and MGIMP -  
Moskovskiy gosudarstvennyy institut mer i izmeritel'nykh priborov  
(Moscow State Institute of Measures and Measuring Instru-  
ments). No personalities are mentioned. There are no references.

Gulnarov, A.I., and G.A. Gol'dshcheyn. (MGIMP); G.A. Cherkasov, V.V.  
Gorodetskiy, and A.S. Shukhdzhaman (MIVesprom). Studying the Reasons  
for Variation of Readings of Car Scales

Zhekhovskiy, M.K. and V.N. Gremenskiy. (MGIMP). Standard Hy-  
draulic Stationary Dynamometers of the Second Class for the 5 and  
50 ton Ranges

Bez', S. Ye. (VNIM) Assembly and Alignment of Stationary  
Dynamometers for Tension and Compression Tests to 10,000 and  
100,000 kgf

Savitskiy, F.S., B.A. Bandyshay, and V.V. Skobelin. (Sverdlovsk  
Branch of VNIM). Effect of Rigidity of the Dynamometer or  
Testing Machines on the Falling Portion of the Extension Diagram

SAVITSKIY, F.S.

24(0); 5(4); 6(2) PHASE I BOOK EXPLOITATION 30V/2215  
Vsesoyuznyy nauchno-issledovatel'skiy institut metrologii imeni  
D.I. Mendeleeva  
Referaty nauchno-issledovatel'skikh rabot; sbornik No. 2 (Scientific  
Research Abstracts; Collection of Articles, Nr. 2) Moscow,  
Standartgiz, 1958, 139 p. 1,000 copies printed.  
Additional Sponsoring Agency: USSR, Komitet standartov, mer i  
izmeritel'nykh priborov.

Ed.: S. V. Reshetina; Tech. Ed.: M. A. Kondrat'yeva.  
PURPOSE: These reports are intended for scientists, researchers,  
and engineers engaged in developing standards, measures, and  
gages for the various industries.

COVERAGE: The volume contains 128 reports on standards of measure-  
ment and control. The reports were prepared by scientists of  
institutes of the Komitet standartov, mer i izmeritel'nykh  
priborov pri Sovete Ministrov SSSR (Commission on Standards,  
Measures, and Measuring Instruments under the USSR Council of  
Ministers). Participating institutes are: VNIIM -  
Vsesoyuznyy nauchno-issledovatel'skiy metrologii imeni D.I.  
Mendeleeva (All-Union Scientific Research Institute of Met-  
rology imeni D.I. Mendeleeva); VNIIM - Vsesoyuznyy nauchno-  
issledovatel'skiy metrologii imeni D.I. Mendeleeva (All-Union  
Scientific Research Institute of Metrology imeni D.I. Mendeleeva);  
institute Komiteta standartov, mer i izmeritel'nykh priborov  
(All-Union Scientific Research Institute of the Commission  
on Standards, Measures, and Measuring Instruments) created  
from MOIMIP - Moskovskiy gosudarstvennyy institut mer i  
izmeritel'nykh priborov (Moscow State Institute of Measures  
and Measuring Instruments) October 1, 1955; VNIIPTRI -  
Vsesoyuznyy nauchno-issledovatel'skiy institut fiziko-tekhnich-  
eskikh i radioelektricheskikh izmereniy (All-Union Scientific  
Research Institute of Physicochemical and Radio-engineering  
Measurements) Moscow; MOIMIP - Kharkovskiy gosudarstvennyy  
institut mer i izmeritel'nykh priborov (Kharkov State Institute  
of Measures and Measuring Instruments); and MOIMIP - Novosil-  
birekiy gosudarstvennyy institut mer i izmeritel'nykh priborov  
(Novosibirsk State Institute of Measures and Measuring Instru-  
ments). No personalities are mentioned. There are no references.

Frequency Service 50

Artem'yeva, Ye. V. (VNIIPTRI). ISCh-1 and ISCh-2 Type Instruments  
for Integral Comparison of Electric Oscillation Frequencies 51

Veyabrut, A. D. and V. K. Budin [Deceased] (VNIIM). Automatic  
Devices for Controlling the Frequency Comparator Unit of Gene-  
rators 52

Fally, G. N. (VNIIPTRI). Standard Frequency Meter (for checking  
purposes) for Frequency Transmission Through a High-power Short-  
wave transmitter 53

Bryzhev, L. D., A. Ye. Leykin, I. V. Baulin, and Ye. Z. Orlov  
(MOIMIP). Determining the Frequency Values of 3-3 Ammonia  
Absorption Lines 54

Hardness and Strength Requirements (Dolinskii, Ye. P., Candidate  
of Technical Sciences)  
Savitskiy, F. S., and I. A. Zakharov (Sverdlovsk Branch of VNIIM).  
Card 11/21

Studying the Effect of Temperature on the  
Parameters of Cone ~~Imp~~ IMPRINT.

AUTHORS: Surikova, Ye. Ye. and Savitskiy, F. S. SOV/126-6-1-26/3

TITLE: ~~Failure Resistance of Hardened Steels in the Case of~~  
Non-uniform Three-dimensional Compression (Soprotivleniye  
razrusheniya zakalennykh staley pri ob"yemnom  
neravnomernom szhatii)

PERIODICAL: Fizika Metallov i Metallovedeniye, 1958, Vol 6, Nr 1,  
pp 173-175 (USSR)

ABSTRACT: The results of investigations of brittle materials  
(gypsum, glass) in the two-dimensional stress state has  
enabled elucidation of the <sup>superiority of the</sup> first theory of strength as  
compared to the second theory (see Davidenkov, N.N. et  
alii, Refs.1 and 2). For three-dimensional compressive  
stresses, the first theory of strength is inapplicable.  
For comparison of other available theories of strength  
with experiment the author describes results of  
compression tests of cylindrical specimens of hardened  
and low temperature tempered steels U8A and U12A  
( $R_c = 60$  to  $63$ ) carried out according to a method  
described by Grozin, B. D. (Ref.3). For verifying the  
measured results, tests were made in a high pressure  
chamber, applying in both cases simple loading. Whilst in

Card 1/3

SOV/126-6-1-26/33

Failure Resistance of Hardened Steels in the Case of Non-uniform  
Three-dimensional Compression

the case of uniaxial compression the specimen failure was by fracture, in the case of three-dimensional compression, in addition to fracture there was shear at an angle of about  $45^{\circ}$  relative to the axis of the cylindrical specimen. The fracture in the case of three-dimensional compression is difficult to explain from the point of view of the III and IV theories of strength. However, the observed two types of failure do not contradict the statistical theory which attributes the failure to microscopic tensile stresses generated by the external load and by the usual non-uniformities in the structure of the materials. The failure of the specimens due to shear is a result of numerous microscopic fractures preliminarily generated by the preceding plastic deformation (Pavlov, V. A. and Yakutovich, M. V., Dokl. Ak. Nauk, 1951, 77, No.1, 49). Thus, the microscopic mechanism of failure of the material remains the same for all types of loading of the specimens

Card 2/3

SOV/126-6-1-26/33

Failure Resistance of Hardened Steels in the Case of Non-uniform  
Three-dimensional Compression

starting from three-dimensional compression and ending  
with three-dimensional tension.  
There are 1 figure and 9 references, all of which are  
Soviet.

ASSOCIATION: Sverdlovskiy filiala VNIIM  
(Sverdlovsk Branch of VNIIM)

SUBMITTED: August 9, 1956

Card 3/3

1 Steel--Hardening 2. Steel--Stresses 3 Steel---Failure  
4 Steel--Test results

SOV/126-6-3-21/32

AUTHORS: Vardyshev, B. A. and Savitskiy, F. S.

TITLE: Determination of the Impact Hardness and of the Constants of Steel (Opredeleniye udarnoy tverdosti i postoyannykh stali)

PERIODICAL: Fizika Metallov i Metallovedeniye, 1958, Vol 6, Nr 3, pp 534-539 (USSR)

ABSTRACT: In the case of determination of the hardness by static methods there is the following dependence between the indentation force  $P$  and the diameter of the indentation  $d$ :  $P = ad^n$ , where  $a$  and  $n$  are constants of the metal of which  $a$  depends on the diameter of the ball, whilst  $n$  does not depend on the ball diameter and varies between 2 and 2.5. According to Klass, (Ref 2) and Edwards and Willis (Ref 3), the exponential relation is also valid for the case of impact indentation of a ball but the numerical value of  $n$  is considerably smaller during impact. Shevandin (Ref 4) found that the value of  $n$  remained practically unchanged for steel and copper on reducing the temperature to between +100 and -196°C and concluded that there is no reason to anticipate a reduction in the value of  $n$  in the case of impact since

Card 1/4



SOV/126-6-3-21/32

Determination of the Impact Hardness and of the Constants of Steel

a reduction in the temperature has the same influence on the properties of steel as an increase in the speed. Also he stated that Klass, Edwards and Willis failed to take into consideration the elastic energy of the specimen and the ramming effect. The aim of the work described in this paper was to measure the impact hardness of carbon steels under varying conditions, to determine the constants  $a$  and  $n$  and to establish the influence of carbon in the steel on the dynamic coefficient. Six grades of carbon steel were investigated on specimens of circular cross section in the annealed state with carbon contents of 0.17, 0.22, 0.47, 0.63, 1.06 and 1.16%. The impact indentation was effected with a ball and with a cone with an angle of  $90^\circ$  at the apex, using a ballistic impact testing machine; the maximum force of impact and the work of the plastic deformation were measured simultaneously. On the basis of the obtained results the following conclusions are arrived at:

1. The energy loss during impact caused by the elastic deformation of the pendulum elements is in the first approximation proportional to the impact force, which

Card 2/4

SOV/126-6-3-21/32

Determination of the Impact Hardness and of the Constants of Steel

apparently is valid for all pendulum impact testing machines;

2. The power index in the Meyer law in the case of impact indentation of a sphere changes little compared to the case of static indentation;

3. The dynamic coefficients depend on the carbon content of the steel and it will be lowest for medium carbon contents;

4. The main source of errors in determining the static strength by means of impact instruments is the dependence of the dynamic coefficient on the carbon content of the steel;

5. It is possible to design a vertical hammer for determining the impact hardness under shop conditions.

The force of impact of the indentation of a sphere into the investigated metal can be determined by means of an elastic element and an instrument containing such an element can be used for determining the impact hardness of metals at elevated temperatures with a satisfactory

Card 3/4 accuracy. The obtained hardness value will characterise

SOV/126-6-3-21/32

Determination of the Impact Hardness and of the Constants of Steel

the resistance of the material to plastic deformation without distortions due to recrystallisation and thus values will be obtained which are important for hot shaping of metals.

There are 4 figures, 2 tables and 11 references, 9 of which are Soviet, 2 German.

ASSOCIATION: Sverdlovskiy filial Vsesoyuznogo nauchno-issledovatel'skogo Instituta metrologii  
(Sverdlovsk Branch of the All-Union Scientific Research Institute on Metrology)

SUBMITTED: August 2, 1957

1. Steel--Hardness    2. Hardness--Measurement    3. Hardness--Testing  
equipment    4. Mathematics--Applications

Card 4/4

18.7100  
18.7200

66721

SOV/126-7-3-19/44

AUTHORS: Savitskiy, F. S. and Burmakina, O. P.

TITLE: On the Plasticity and <sup>16</sup>Fracture<sup>18</sup> of Quenched Steel in a Uni-Planar Stressed State (O plastichnosti i razrushenii zakalennoy stali pri ploskom napryazhennom sostoyanii)

PERIODICAL: Fizika metallov i metallovedeniye, Vol 7, Nr 3, pp 421-425 (USSR)

ABSTRACT: In the present work the results of experiments with the quenched and low-temperature tempered steel U7<sup>18</sup> are given for stressed states ranging from uniaxial straining to uniaxial compression. The limiting fracture lines are given, as well as limiting plasticity lines. The former differ considerably from the limiting lines obtained earlier for cast iron (Ref.9), gypsum, glass (Ref.10) and magnesium alloys (Ref.11). The experiments were carried out on thin-walled tubular specimens of the steel U7. The specimens were quenched from 800°C through oil into water, and subsequently tempered at 350°C. The heat treated specimens were ground. The hardness of the quenched and tempered working portions of the specimens was  $H_{RC} = 45-48$ .

Card 1/4

67721

SOV/126-7-3-19/44

On the Plasticity and Fracture of Quenched Steel in a Uni-Planar Stressed State

The shape and dimensions of the specimens are shown in Fig.1. The specimens were tested in a specially made apparatus (see Fig.2). The uni-planar stressed state was brought about by the joint action of internal hydrostatic pressure and axial compressive force. Internal pressure was created by a hydraulic press with a limiting pressure of 5000 kg/cm<sup>2</sup>. The external axial loading was carried out in a universal testing machine. The ratio between the main normal stresses  $k = \sigma_z / \sigma_\theta$  was kept constant during the experiment. Here  $\sigma_z$  is the main normal stress in the axial direction, and  $\sigma_\theta$  the main normal stress in the tangential direction. The radial stress  $\sigma_r$  in the specimen walls was ignored. For the various tests  $k$  was changed between 0 and  $\infty$  (from pure peripheral straining to pure axial compression). In each test the axial force, the internal pressure, and the longitudinal and cross-sectional deformations of each

Card 2/4

67721

SOV/126-7-3-19/44

On the Plasticity and Fracture of Quenched Steel in a Uni-Planar Stressed State

specimen were measured. The last were measured by mechanical tensiometers (Ref.6). The deformation curves  $\sigma_1 = \sigma_1(\epsilon_1)$  for various values of main stresses are shown in Fig.3 ( $\sigma_1$  and  $\epsilon_1$  are identified in Eqs.(3) and (4) on p 422). The values of ultimate tensile strength  $\sigma_{1g}$  for various values of  $k$  are shown in Fig.4. The ultimate stresses at which specimens fracture are shown graphically in Fig.5. The nature of fracture of a few specimens is shown in Fig.6. The authors draw the following conclusions:

1. The deformation curves  $\sigma_1 = \sigma_1(\epsilon_1)$ , plotted for quenched and low-temperature tempered steel U7 in the change range  $\sigma_z/\sigma_0$  from 0 -  $\infty$  depends on the form of the stressed condition.

2. The beginning of yield and fracture agree best with the strength condition deduced by Yu. I. Yagn and statistic

Card 3/4 conditions of plasticity and strength.

4

67721  
SOV/126-7-3-19/44  
On the Plasticity and Fracture of Quenched Steel in a Uni-Planar  
Stressed State

There are 6 figures and 14 references, of which 13 are  
Soviet and 1 English.

ASSOCIATION: Sverdlovskiy filial VNIIM (Sverdlovsk Branch of VNIIM)

SUBMITTED: August 6, 1957

4

Card 4/4

S/137/60/000/009/027/029  
A006/A001

Translation from: Referativnyy zhurnal, Metallurgiya, 1960, No. 9, p. 265,  
# 21665

AUTHORS: Burmakina, O.P., Savitskiy, F.S.

TITLE: Mechanical Properties of Quench-Hardened Steel <sup>18</sup> During Bi-Axial  
Stretching

PERIODICAL: V sb.: Nekotoryye probl. prochnosti tverdogo tela, Moscow-Lenin-  
grad, AN SSSR, 1959, pp. 334-339

TEXT: A study was made of the effect of test conditions (strained state) on the mechanical properties of  $\gamma$  8A (U8A) steel. The tests were carried out with thin-walled tubular specimens of 20 mm in diameter, quenched through oil into water from 840°C and tempered at 340°C. The strained state of the specimens was controlled using internal hydrostatic pressure (up to 5,000 kg/cm<sup>2</sup>) jointly with axial tensile force varying within a wide range, i.e., from plain uni-axial stretching to plain tangential stretching. It was established that the effect of the nature of strained state on the location of deformation curves does not go

Card 1/2



S/137/60/000/009/027/029  
A006/A001

Mechanical Properties of Quench-Hardened Steel During Bi-Axial Stretching

beyond the limits of natural straggling. The onset of yield agrees, best of all, with the Mises-Henky conditions of ductility. It can be considered that breakdown of quench-hardened steel during bi-axial stretching occurs at  $\sigma_{\max} = \sigma_t$ . There are 14 references. ✓

T.F.

Translator's note: This is the full translation of the original Russian abstract.

Sverdlovsk Affiliate, All-Union Sci. Res. Inst. Metrology im D. I. Mendeleyev

Card 2/2

S/126/60/010/004/017/023  
E193/E483

AUTHORS: Burmakina, O.P. and Savitskiy, F.S.

TITLE: On Fracture of Hardened Steel in Biaxial Compression

PERIODICAL: Fizika metallov i metallovedeniye, 1960, Vol.10, No.4;  
pp.609-616

TEXT: Calculations of the strength of machine parts are frequently based on classical theories of strength of materials, including the I-st theory of maximum normal tensile stresses, the II-nd theory of maximum elongation, the III-rd theory of maximum tangential stresses and the IV-th energetic theory. Experience has shown that the results of calculations, based on any one of these theories, agree with the experimental data only for a narrow range of the possible combinations of stresses. Without a comprehensive body of experimental evidence, it would not be possible to choose the theory appropriate for any given application and it was for this reason that the present authors had undertaken to study fracture of steel Y8A (U8A) under a wide range of stress conditions (1st, 2nd and 3rd quadrants of the stress diagram). The results of the investigation relating to fracture under stress corresponding to the 1st quadrant have been reported elsewhere (Ref.6). The object  
Card 1/3

S/126/60/010/004/017/023  
E193/E483

On Fracture of Hardened Steel in Biaxial Compression

of the present investigation was to study fracture of tubular specimens of steel U8A (both in quenched and tempered condition), subjected to stresses ranging from pure tangential tension to pure tangential compression. In addition, solid specimens of the same steel were tested under conditions of uniaxial tension, uniaxial compression, and pure shear, and the results obtained were used to construct the limiting curves of fracture for all four quadrants of the stress diagram. The mode of fracture of steel U8A confirmed the validity of the I-st theory of strength in the 1st quadrant and particularly in the 3rd quadrant but not in the 2nd quadrant of the stress diagram. Judged by the results of the present investigation, the II-nd theory of strengths is incorrect. Neither did the experimental results (breaking stress and the character of fracture) agree with the III-rd and IV-th classical theories. On the other hand, the results obtained were in quite close agreement with the statistical theory of strength and the conditions of strength postulated by Yagn (Ref.8). There are 5 figures, 1 table and 12 references: 8 Soviet and 4 English.

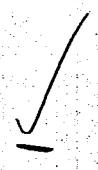
Card 2/3

S/126/60/010/004/017/023  
E193/E483

On Fracture of Hardened Steel in Biaxial Compression

ASSOCIATION: Sverdlovskiy filial VNIIM  
(The Sverdlovsk Branch of VNIIM)

SUBMITTED: April 28, 1960



Card 3/3

SAVITSKIY, F.S.

Checking pendulum-type impact testers. Izv. tekhn. no. 11:  
26-28 N '64. (MIRA 18:3)

SAVITSKIY, F.S.

Method of determining energy losses under elastic-plastic impact. Zav. lab. 30 no.11:1385-1387 '64 (MIRA 18:1)

1. Sverdlovskiy filial Vsesoyuznogo nauchno-issledovatel'skogo instituta metrologii im. D.I. Mendeleeva.

SAVITSKIY, F.S.

Elastic dynamometer for measuring impact loads. Zav. lab. 30 no.11:  
1414-1415 '64 (MIPA 18:1)

1. Sverdlovskiy filial Vsesoyuznogo nauchno-issledovatel'skogo  
instituta metrologii im. D.I. Mendeleyeva.

SAVITSKIY  
USSR/Soil Science - Cultivation. Melioration. Erosion.

J-5

Abs Jour : Ref Zhur - Biol., No 9, 1958, 39046

Author : Savitskiy, F. I.

Inst : -

Title : Without Moldboard Soil Cultivation in the Sovkhoz Imeni  
Magnitostroy.

Orig Pub : S. Kh. Povolzhya, 1957, No 6, 17-19.

Abstract : By plowing the fallow field without moldboard up to a  
depth of 40-45 cm in clayey and sandy-loamy southern  
black-earths and dark-chestnut soils of middle thickness,  
a yield of summer wheat of 18 c/ha was obtained against  
a yield of 15.7 produced by conventional plowing at a  
depth of only 20-22 cm.  
The experiment took place in 1956.

Card 1/1

- 28 -



SAVITSKIY, T. Ye.

Agriculture of Kazakhstan in 1958. Zemledelie 6 no.11:17-20  
N '58. (MIRA 11:11)

1. Zamestitel ministra sel'skogo khozyaystva Kazakhskoy SSR.  
(Kazakhstan --Agriculture)

\*SAVITSKIY, GEORGIY, Adoes'ovich, Electronic Engineering

"Antenna Installations, " (Bk.), Moscow, 1947.

#E-3

SAVITSKIY, G.A., laureat Stalinskoy premii, kandidat tekhnicheskikh nauk.

Computation of guy wires. Mekh.stroi. 4 no.12:20-22 D '47.

(MLRA 9:3)

1. Ministerstvo svyazi.

(Wire rope) (Elastic rods and wires)

SAVITSKIY, G.A., inzh.

Effect of wind loads on the vibration of structures. Stroil.  
prom. 27 no.6:21-23 Je '49. (MIRA 13:2)  
(Wind pressure) (Vibration)

SAVITSKIY, G.A.

[Principles of radio tower calculation; statics and dynamics]  
Osnovy rascheta radiomacht; statika i dinamika. Moskva, Gos.  
izd-vo lit-ry po voprosam svyazi i radio, 1953. 272 p.

(MLRA 6:12)

(Radio--Antennas)

KOSIKOV, K.M.; MITTELLO, B.F.; MODEL', A.M.; SAVITSKIY, G.A.; FEDOROVICH, Ye.G.  
SHCHETININ, A.P.; FEDUNIN, G.A., otv.red.; GALOYAN, M.A., red.  
SHEFER, G.I., tekhn.red.

[Handbook for electric communications]. Inzhenerno-tekhnicheskii  
spravochnik po elektrosvyazi. Moskva, Gos.izd-vo lit-ry po voprosam  
svyazi i radio. Vol.8, [Radio], Radiosvaz', 1958. 500 p. (MIRA 11:8)

1. Russia (1923- U.S.S.R) Ministerstvo svyazi.  
(Radio)

3(7)

SCV/50-59-5-5/22

AUTHOR: Savitskiy, G. A.

TITLE: Wind Load of Technical Structures (Vetrovaya nagruzka na inzhenernyye sooruzheniya)

PERIODICAL: Meteorologiya i gidrologiya, 1959, Nr 5, pp 30 - 32 (USSR)

ABSTRACT: The cause of oscillations of buildings is to be found in the form of construction, not in the nature of the wind. For the calculation of buildings, the following parameters of the wind load must be known: 1) The amount of the largest calculated velocity pressure or the wind velocity near the surface of the earth. 2) The law of distribution of the wind velocity by the height. 3) The law of distribution of the wind velocity by the horizontal line on the earth's surface and at different altitudes. Insufficient indications in the building standards are pointed out in this connection. Not only the indication of the maximum velocity but also that of the wind frequency, are of importance. In setting up new standards, fundamental recommendations for the consideration of the microrelief of the landscape must be given. For the calculation of buildings, the coefficient of the unsteadiness of the wind and the duration of the increase and de-

Card 1/2

Wind Load of Technical Structures

SOV/50-59-5-5/22

crease in the wind velocity at the unsteadiness must be known. It is important to know this coefficient of the unsteadiness not only on the earth's surface but also at different altitudes. Television towers and radio masts can be used for these observations. Finally, the compilation of a map of the USSR with indications of the calculated wind velocity is demanded together with instructions for precisely determining the wind load according to local conditions.

Card 2/2



PHASE I BOOK EXPLOITATION

SOV/5724

Moscow. Universitet.

Voprosy mekhaniki; sbornik statey. vyp. 193. (Problems of Mechanics; Collection of Articles. no. 193) [Moscow] Izd-vo Mos. univ., 1961. 169 p. Errata slip inserted. 5,000 copies printed.

Sponsoring Agency: Moskovskiy gosudarstvennyy universitet imeni M. V. Lomonosova.

Ed.: L. N. Sretenskiy, Corresponding Member, Academy of Sciences USSR. Ed. (This vol.): I. Z. Pirogov; Tech. Ed.: G. I. Georgiyeva.

PURPOSE: This book is intended for engineers and scientific workers interested in the mechanics of materials, fluid dynamics, and radiation.

COVERAGE: The book contains articles on problems of algebra, non-linear programming, motion of particles, elasticity, stress-strain, vibration, and flow of liquids. No personalities are mentioned. References follow all but one article.

Card 1/3

Problems of Mechanics; (Cont.)

SOV/5724

TABLE OF CONTENTS:

Karmishin, A. V., and R. S. Sholukova. Some Formulas for Reducing Algebraic Determinations to Polynominal Forms	5
Karmishin, A. V. New Analogues Between Problems of Motion of a Particle and Problems of Equilibrium of a Perfectly Flexible Thread	11
Korolev, V. I., I. G. Smirnov, and V. N. Sokopov. Investigating the Stability of a Cylindrical Shell Beyond the Limit of Elasticity	22
Moskvitin, V. V. Elastic-Plastic Strains After a Large Number of Cyclic Stresses	42
Ogibalov, P. M., and I. M. Tyuneyeva. Full Static Diagrams of the Stress-Strain of Steel Cables	52

Card 2/3

Problems of Mechanics; (Cont.)

SOV/5724

Rodzevich, I. A. On the Computation of Multilayer Elastic Foundations	57
Savinov, G. V. Use of Electric Modeling Layout in Problems of Nonlinear Programming	68
Popov, S. G., and G. A. Savitskiy. On Aerodynamic Forces Acting on a Circular Cylinder Oscillating in a Flow	72
Prokof'yev, V. A. Infinitesimal Forced Waves in a Radiating Barotropic Medium	93
Prokof'yev, V. A. Distribution of Free Weak Plane Waves in a Radiating Viscous Gas	131
Kurlovich, Ye. A. Motion of a Sphere Under the Surface of a Heavy Liquid	157

AVAILABLE: Library of Congress

Card 3/3

AC/dfk/ec  
11-6-61

2009h

S/106/60/000/012/007/009  
A055/A033

9.1000 (and 1103, 1127, 1130)

AUTHOR: Savitskiy, G. A.

TITLE: Some Problems Concerning Antenna Design

PERIODICAL: Elektrosvyaz', 1960, No. 12, pp. 69-71

TEXT: The statistical methods and the theory of probability, so widely used nowadays in the design of radiotechnical equipments, should also be applied, in the opinion of the author, to the calculation of antennae or, more precisely, to the constructional or mechanical part of this calculation. This would result, indeed, in reducing considerably the cost of antenna installations. Several practical examples supporting his point of view are proffered by the author and discussed in some detail. As regards the resistance to wind, for instance, the wind velocity usually taken as basis for antenna calculation occurs practically as rarely as once every 20 years. The conditions set upon the antenna supports were therefore unnecessarily exacting. By rendering them more adequate and practical, it was possible to reduce quite substantially the cost of the supports. When calculating a possible deformation of an antenna due to high temperatures, it is likewise

Card 1/2

20094

S/106/60/000/012/007/009  
A055/A033

Some Problems Concerning Antenna Design

reasonable to take into account the fact that the maximum temperature allowed for in the design is actually observed very rarely in the majority of regions where an antenna is to be installed. The conditions set upon the quality of the reflecting surface should consequently be fixed on the basis of a temperature observed more frequently than the maximum temperature. A statistically justified probability must also apply in the case of deformations due to very low temperatures, i. e. to possible deposits of ice on the wires. In the case of antenna arrays suspended on numerous supports, for instance, the sag due to deposits of ice must be calculated in accordance with these statistical probabilities, which would allow to reduce the number of supports and, therefore, the cost of the whole installation.

Card 2/2

SAVITSKIY, Georgiy Adol'fovich; VENGRENYUK, L.I., red.; MARKOCH, K.G.,  
tekh. red.

[Antenna systems] Antennye ustroistva. Moskva, Gos. izd-vo lit-ry  
po voprosam svyazi i radio, 1961. 479 p. (MIRA 14:11)  
(Antennas (Electronics))

S/124/62/000/004/007/030  
D251/D301

24.7300

AUTHORS: Popov, S. G. and Savitskiy, G. A.

TITLE: Aerodynamic forces acting on a circular cylinder with its oscillations in a stream

PERIODICAL: Referativnyy zhurnal, Mekhanika, no. 4, 1962, 31-32,  
abstract 4B175 (Uch. zap. MGU, 1961, no. 193, 72-92)

TEXT: Results are obtained in the theoretical and experimental investigations of the non-stationary aerodynamic forces acting on a circular cylinder with its oscillations in a stream. In the experimental part of the investigation, conducted in an aerodynamic tunnel with closed working part, the problem was posed of determining the dependence of the non-stationary aerodynamic forces acting on a circular cylinder in the presence of its transverse oscillations in a current on the numbers of Reynolds and Strukhal'. The variable forces were calculated with the aid of a battery of U-shaped spirit manometers, fixing the pressures at 30 points of the surface of the cylinder. The measuring system led to a dynamic ca-

Card 1/2

Aerodynamic forces acting ...

S/124/62/000/004/007/030  
D251/D301

librator which permitted the amplitude- and phase-error to be substantially reduced. The registration of the variable pressures was accomplished with the aid of photocells and a loop oscillograph or else with the aid of direct photo-recording of the colored columns of spirit. In the results of processing the experimental material the dependence of the coefficients  $C_y$  and  $C_x$  on the array of characteristic parameters was obtained. Also in this part of the work were found reflected the results of a series of experiments carried out earlier chiefly by foreign authors. The theoretical part of the work consists of a description of calculation and semi-empirical methods of determining the coefficient of lateral force in the number and method proposed by the authors. It is shown that the experimental and theoretical results obtained may be used for the simplification of calculations of the oscillations of structures in which the basic element is a circular cylinder.  
/Abstracter's note: Complete translation./

Card 2/2



SAVITSKIY, Georgiy Adol'fovich; NOVIKOV, S.A., red.; MARKCCH, K.G.,  
tekh. red.

[Antenna and tower structures] Antenno-machtovye sooruzheniia.  
Moskva, Sviaz'izdat, 1962. 229 p. (MIRA 15:7)  
(Antennas (Electronics))

L 40985-66

ACC NR: AR6011865

SOURCE CODE: UR/0299/65/000/020/M017/M017

AUTHOR: Savinskiy, G. A.

TITLE: On the technique of lung autotransplantation

SOURCE: Ref. zh. Biologiya, Abs. 20M104

REF SOURCE: Sb. nauchn. rabot In-t eksperm. biol. i med. Novosibirsk.  
vyp. 2, 1964, 509-511

TOPIC TAGS: organ transplant, animal experiment, biologic respiration,  
*thoracic surgery*

ABSTRACT: In experiments on dogs the left lung was replanted in 19 cases, the right lung was replanted in 18 cases and both lungs were replanted in 7 cases. The pulmonary vein was isolated with as large as possible section of the left atrium cordis. The bronchi were sectioned last. A continuous twisted suture was used in the anastomosis. For control of a complete section, ligature was used; it was placed at the root of the lung and was lowered inside as the lung's elements were cut until it became free and could not be extracted. Blood circulation was cut off in the lung for 20 to 40 min and ventilation was cut off for 10 to 15 min. Bilateral replantation was performed in 1 or 2 stages and the trachea was severed last. Twelve dogs died during the operation and 11

Card 1/2

UDC: 577.99

L 40985-66

ACC NR: AR6011865

dogs died during the first 10 days. Roentgenography, bronchography, pneumoangiography and spirometry showed that the replanted lung preserved its anatomic structure, performed its respiratory function and ensured animal viability. L. Liozner. [Translation of abstract].

SUB CODE: 06

Card 2/2 11b

SAVITSKIY, G.A.

Simple technique leading to more rapid elimination of pathologic amounts of residual urine in patients having undergone radical hysterectomy for cancer of the cervix uteri. Akush. i gin. 40 no.4:138-139 J1-Ag '64. (MIRA 18:4);

1. Oblastnoy onkologicheskoy dispensar (glavnyy vrach. L.N.Akinchev), Leningrad.

SAVITSKIY, G.A.

Study of fetal heart beat and motion activity in pregnancy of diabetics as an evaluation method for the effectiveness of treatment. Akush. i gin. 40 no.3:46-49 My-Je '64. (MIRA 18:6)

1. Laboratoriya normal'noy i patologicheskoy fiziologii (zav. - prof. N.I.Garmasheva) i otdeleniye fiziologii i patologii beremennosti (zav. - prof. S.M.Pekker) Instituta akusherstva i ginekologii (dir. - prof. M.A.Petrov-Maslakov) AMN SSSR, Leningrad.

MASTROVA, L. I. (MIRA), I. L., Leningrad, (Sov. Union).

Insulin, sugar, and lactation in diabetes mellitus. Abstr. 1 gin.  
No. 20135-137 '80.

(MIRA 18:10)

1. Limitation of insulin in diabetes mellitus (Director - children's correspondent  
AMN USSR prof. W. A. Kozlov-Moscow) AMN USSR, Leningrad.

ACC. NR: AP6034224

SOURCE CODE: UR/0120/66/000/005/0090/0094

AUTHOR: Afanas'yev, N. G.; Denyak, V. M.; Reva, D. P.; Savitskiy, G. A.; Startsev, V. I.; Shevchenko, N. G.

ORG: Khar'kov Physicotechnical Institute, AN UkrSSR (Fiziko-technicheskiy institut AN UkrSSR)

TITLE: A cherenkov counter for recording high energy electrons

SOURCE: Pribory i tekhnika eksperimenta, no. 5, 1966, 90-94

TOPIC TAGS: radiation counter, nuclear physics apparatus, electron detection,  
CHERENKOV COUNTER, SPECTROMETER

ABSTRACT: A Cherenkov counter serving as a detector of fast electrons at the output of a magnetic spectrometer is described. The counter is designed to detect electrons with  $E_e > 100$  Mev. from linear accelerators with sendings durations ranging from 0.2 to 2.5  $\mu$ sec. The electronic circuit of the counter includes a scaling circuit with a ratio of 1:4 and with the resolution of 30 nsec, a pulse forming circuit, and passing circuit which permit counter operation to be synchronized with the electrons accelerator. The time resolution of the counter (50 nsec.) permits recording of up to 4 pulses for each sending from the accelerator. Recording effectiveness is near 100%. The authors express their gratitude to V. V. Kondratenko, S. D. Faynizlberg, A. I. Germanov, and L. A. Makhnenko for the development of the device. Orig. art. has: 5 figures.

SUB CODE: 20 / SUBM DATE: 03Aug65/ ORIG REF: 003/ OTH REF: 003

Card 1/1

UDC: 539.1.074.4

SAVITSKIY, G.

Category : POLAND/Nuclear Physics - Elementary Particles

C-3

Abs Jour : Ref Zhur - Fizika, No 2, 1957 No 3163

Author : Chizh, V., Savitskiy, G.

Title : Polarization of Nucleons in Photonuclear Reactions

Orig Pub : Byul. Pol'skoy AN, 1956, Otd. 3, 4, No 3, 137-141

Abstract : See Ref. Zh. Fiz. 1957, 6019 [sic!]

Card : 1/1



SAVITSKIY, G.I. - inzh.

Problem pertaining to projection on a bisector plane. Trudy GPI 14  
no.7:37-40 '58. (MIRA 14:3)

(Projection)

SAVITSKIY, G.I., inzh.

Determining the basic parameters of rectangular axonometry. Trudy  
GPI 14:29-36 '58. (MIRA 14:3)  
(Axonometric projection)

SAVITSKIY, G.I., inzh.

Straight line at given angles of inclination to the projective  
planes. Trudy GPI 14 no.7:13-28 '58. (MIRA 14:3)  
(Projection)



SAVITSKIY, I., podpolkovnik; LYAKHOVSKIY, A., podpolkovnik zapasa

Using visual publicity material. Voen. vest. 40 no. 3:52-53

Mr '61.

(MIRA 14:2)

(Military education--Audio-visual aids)

SAVITSKY, T.I.

Digestive Organs--Cancer

Early diagnosis of cardiac and gastric cancer. Khirurgiia, no. 12, 1951.

MONTHLY LIST OF RUSSIAN ACCESSIONS, LIBRARY OF CONGRESS, MARCH 1952. UNCLASSIFIED.

PLETNEVA, Larisa Nikitichna; MEKLER, A.G., kand. tekhn. nauk, retsenzent;  
SAVITSKIY, I.A., inzh., retsenzent; EYDEL'MAN, B.E., inzh., red.;  
KHITROVA, N.A., tekhn. red.

[Electric equipment for cranes] Kranovoe elektrooborudovanie.  
Moskva, Vses.izdatel'sko-poligr. ob"edinenie M-va putei soob-  
shcheniia, 1962. 74 p. (MIRA 15:3)  
(Electric cranes)

SAVITSKIY, I.I.; TRAMM, B., redaktor; DMITRIYEV, P., tekhnicheskii  
redaktor.

[Local air-raid defense for residential areas] MPVO zhilogo  
doma. 2-e ispr. izd. Moskva, Izd-vo Detsaaf, 1951. 110 p. [Microfilm]  
(Air defenses) (MLRA 7:11)



SAVITSKIY, I.

Protivozdushchnaya oborona [Anti-aircraft defense]. Moskva, Izd-vo DCSAAF, 1952. 220 p

SO: Monthly List of Russian Accessions, Vol 6 No 8 November 1953

SAVITSKIY, I.

Incendiary bombs and how to extinguish them. Kryl.rod. 3 no.12:17-20  
D '52. (Projectiles, Incendiary) (MLRA 8:8)

SAVITS'KIY, I.I.; KUROCHKIN, F., redaktor; GOLOVCHENKO, G., tekhnicheskiiy  
redaktor.

[Local antiaircraft defense for an apartment house] MPPO zhyloho  
budynku. Pereklad z 2-ho vypravlenoho rossijs'koho vydannia. Kyiv,  
Derzh. vyd-vo tekhn. lit-ry ~~Urss~~SR, 1953. 110 p. [Microfilm]  
(Air defenses) (MLRA 8:2)

SAVITSKIY, I.I.; KIRILLOV, P.M.; KUROCHKIN, F., redaktor; GOLOVCHENKO,  
H., tekhnicheskiy redaktor.

[Antiaircraft defense; manual for instructors in antiaircraft  
defense in the All-Union Volunteer Society for Cooperation  
with the Army, Air Force, and Navy. Translated from the Russian]  
Protypovitriana oborona; posibnyk dlia instruktoriv PPO DTSAAP.  
Pereklad z rosiis'skoi. Kyiv, Derzh.vyd-vo tekhn. lit-ry, 1953.  
215 p. [Microfilm] (MIRA 8:2)  
(Air defenses)

SAVITSKIY, I.

Protection against poison gases. Kryl.rod 4 no.6:18-20 Je '53.(MLHA 6:6)  
(Gas masks)

SAVITSKIY, I.

Poisonous gases of the capitalist armies. Voen.znan. 29 no.7:15 J1 '53.  
(ML3a 6:7)  
(Gases, Asphyxiating and poisonous--War use)

*Savitskiy, Iosif Iosifovich*

PHASE I BOOK EXPLOITATION

273

Savitskiy, Iosif Iosifovich

Chto nuzhno znat' dlya zashchity ot porazheniya s vozdukha (What the Public Should Know About Defense Against Destruction From the Air)  
Moscow, Izd-vo DOSAAF, 1957, 94 p. 200,000 copies printed.

Ed.: Kanevskaya M. D.; Tech. Ed.: Blazhenkova, G.

PURPOSE: This popularly written book is designed to instruct the public regarding modern warfare and means of civil defense.

COVERAGE: The book gives basic information on aerial bombs, stable and unstable war gases (including a list of war gases having toxic, vesicant, asphyxiating, and irritating effects), bacteriological weapons (pathogenic microbes and toxins producing infectious diseases), atomic weapons (explosive

Card 1/7

What the Public Should Know About Defense (Cont.) 273

and non-explosive action) in Chapter I. In Chapter II, the set-up of antiaircraft defense, local antiaircraft defense, etc. is described. Chapter III explains alarm signals and rules of conduct. Chapter IV enumerates means of defense. Chapter V describes various types of blackout. Chapter VI gives information on first aid, Chapter VII on methods of firefighting, and Chapter VIII on detection of toxic and radioactive substances and bacterial agents. The book contains 36 illustrations.

Card 2/7



What the Public Should Know About Defense (Cont.) 273

TABLE OF CONTENTS

Ch. I. Modern Means of Attack and Destruction	5
1. Action of high-explosive, splinter, and incendiary aerial bombs	7
2. What are toxic substances and how do they affect man?	10
3. What are bacteriological weapons?	15
4. What are atomic weapons?	19
Ch. II. Basic Information on Antiaircraft Defense (PVO), Local Antiaircraft Defense (MPVO), and the All-Union Voluntary Society for the Promotion of the Army, Aviation, and Navy (DOSAAF)	24
1. What is PVO?	24

Card 3/7

What the Public Should Know About Defense (Cont.)	273
2. What is Local PV0?	26
3. Problems of the DOSAAF in promoting MPVO measures	28
Ch. III. Duties and Rules of Behaviour for the Public in Alerts ("Impending Danger") and in Conforming to MPVO Signals	29
1. "Impending danger"	29
2. MPVO signals	30
3. What to do at the "air alarm" signal	30
4. What to do at the "chemical attack" signal	33
5. How to behave in a contaminated area or in an area hit by an atomic explosion	33
6. What to do after evacuation of the contaminated area	35
Ch. IV. Means of Civil Defense in the Case of Air Attack	37
1. Types of shelters	37
2. Why is filter-ventilation necessary	40
Card 4/7	

What the Public Should Know About Defense (Cont.)	273
3. How shelters (dugouts, etc.) are built	40
4. Maintenance of various shelters	45
5. What rules must be followed when using shelters?	46
6. Existing personal means of defense against chemical attack	47
7. Construction of the GP-4 gasmask	48
8. How to select the GP-4 gasmask and check its fit	51
9. How to use the GP-4 gasmask	55
10. Means of skin protection	58
11. How to preserve gasmasks and skin-protecting agents	59

Card 5/7

What the Public Should Know About Defense (Cont.)	273
Ch. V. Light Discipline (Blackout) and Its Purpose	59
1. Blackout procedure in inhabited localities	60
2. Masking of light-admitting openings	62
Ch. VI. First Aid to Victims	69
1. How to give first aid to oneself and others	69
2. Methods of removal and transport of victims	78
Ch. VII. Methods of Firefighting in Case of Incendiary Attack	80
1. How to lessen the danger of fire breaking out in a dwelling	81
2. Means for extinguishing fires	84
3. How to deal with incendiary bombs	85
4. What must be done when a fire breaks out	89

Card 6/7

What the Public Should Know About Defense (Cont.) 273

Ch. VIII. How to Detect Toxic and Radioactive Substances or  
Bacteriological Agents in the Air and on the Ground 90

AVAILABLE: Library of Congress

MLM/jmr

Card 7/7

ROVENSKIY, I.I., kand. tekhn. nauk; SAVITSKIY, I.I.; RUDOVSKIY, G.I.;  
BEREZHNOY, N.N.

Economizing on solid fuel by using gas in sintering operations.  
Met. i gornorud. prom. no.2:73 Mr-Ap '65.

(MIRA 18:5)

BRONSON, H.T., N.Y.; KOPLOVICH, M.I.; KUTCH, G.S.; SACHS, I.I.;  
SHEPHERD, L.I.

Improving the degree of ore crushing by blasting. Gor. zhur.  
no.7:42-46 J1 '65. (MIRA 18:8)

S/137/61/000/012/008/149  
A006/A101

AUTHORS: Savitskiy, I.I., Gol'din, M.L., Litochevskiy, Ye.G.

TITLE: Outlooks of assimilating devices with  $\gamma$ -radiation sources on the Southern Mining Concentration Combine

PERIODICAL: Referativnyy zhurnal. Metallurgiya, no. 12, 1961, 12, abstract 12V90 (V sb. "Radioakt. izotopy i yadern. izlucheniya v nar. kh-ve SSSR", v. 3, Moscow, Gostoptekhizdat, 1961, 150 - 153)

TEXT: Gamma-relays to control and regulate processes have been employed and are being tested. At the Combine devices are tested which are used to control the existence of bedding on a conveyer belt. At the present, automation is being developed for loading and unloading the ore from parabolic bins which are intermediate storages between the crushing and concentrating shops. This will assure continuous raw material supply to ball mills and a high factor of filling the bins. Automation is also being developed for regulating the density of pulp on the classifier overflow. In such a manner, the use of gamma-radiation will make it possible to solve the automation problem of processes. The economical

Card 1/2



Outlooks of assimilating devices ...

S/137/61/000/012/008/149  
A006/A101

effect will be very high due to the liberation of some of the attending staff, receiving high wages. It will also be possible to raise the efficiency of the existing equipment and to improve the quality of production. ✓

A. Shmeleva

[Abstracter's note: Complete translation]

Card 2/2

SAVITSKIY, I.I.; ARSENT'YEV, A.I., kand.tekhn.nauk

Planning the development of mining operations in an open pit of the Southern Mining and Ore Dressing Combine. Gor.zhur. no.5: 10-14 My '62. (MIRA 16:1)

1. Direktor Yuzhnogo gorno-obogatitel'nogo kombinata, Krivoy Rog (for Savitskiy). 2. Krivorozhakiy gornorudnyy institut (for Arsent'yev).

(Krivoy Rog Basin--Strip mining)

U  
ALEKSEYEV, F.K.; ANDRIYUTS, G.L.; ARSENT'YEV, A.I.; ASTAF'YEV, Yu.P.;  
BEVZ, N.D.; BEREZOVSKIY, A.I.; GENERALOV, G.S.;  
DOROSHENKO, V.I.; YESHCHENKO, A.A.; ZAPARA, S.A.; KALINICHENKO, V.F.;  
KARNAUSHENKO, I.K.; KIKOVKA, Ye.I.; KOBOZEV, V.N.; KUPIN, V.Ye.;  
LOTOUS, V.K.; LYAKHOV, N.I.; MALYUTA, D.I.; METS, Yu.S.; OVODENKO,  
B.K.; OKSANICH, I.F.; PANOV, V.A.; POVZNER, Z.B.; PODORVANOV, A.Z.;  
POLISHCHUK, A.K.; POLYAKOV, V.G.; POTAPOV, A.I.; SAVITSKIY, I.I.;  
SERBIN, V.I.; SERGEYEV, N.N.; SOVETOV, G.A.; STATKEVICH, A.A.;  
TERESHCHENKO, A.A.; TITOV, O.S.; FEDIN, A.F.; KHOMYAKOV, N.P.;  
SHEYKO, V.G.; SHEKUN, O.G.; SESTAKOV, M.M.; SHTAN'KO, V.I.

Practice of construction and exploitation of open pits of Krivoy  
Rog Basin mining and ore dressing combines. Gor. zhur. no.6:  
8-56 Je '63. (MIRA 16:7)

(Krivoy Rog Basin—Strip mining)

SAVITSKIY, Ivan Nikolayevich; KREYNIN, Gerts L'vovich; MIKHAYLOV, Andrey Andreyevich; SMIRNOV, Ye.I., red.; DUBINSKIY, G.L., spets. red.; PONOMAREVA, A.A., tekhn. red.

[Planning and organization of the supply of materials and equipment in enterprises and construction projects] Planirovanie i organizatsiya material'no-tekhnicheskogo snabzheniya predpriyatii i stroek. Moskva, Ekonomizdat, 1962. 303 p. (MIRA 15:8)

(Industrial procurement)

SOV/136-59-3-12/21

AUTHORS: Shashkov, Yu.M. and Savitskiy, I.V.

TITLE: Horizontal Zone-melting of Silicon (Gorizonta'l'naya zonnaya plavka kremniya)

PERIODICAL: Tsvetnyye Metally, 1959, Nr 3, pp 49 - 53 (USSR)

ABSTRACT: It is possible to obtain silicon with a high specific resistance by horizontal zone-melting if the purity of the quartz boat is high and there is no boron in the initial silicon. Ordinary apparatus cannot be used as cracking of the silicon specimen occurs whilst passing a zone along it and during cooling due to the difference in the coefficients of expansion for silicon and quartz. The present work describes apparatus which enables multiple zone-melting of silicon in a boat without cracking and the construction of a boat which allows the silicon to cool without cracking. All parts of the boat and the silicon specimen are maintained at a temperature higher than 800-900 °C similar to the method used by Taft and Horn (Ref 1). The whole apparatus is evacuated to  $10^{-4}$  mm Hg. It is shown in Figure 1, the main parts being: 1) the basic heater; 2) the additional heaters

Card1/3

SOV/136-59-3-12/21

### Horizontal Zone-melting of Silicon

and, 3) the boat with the silicon. The basic heater is made of tantalum plate and is horse-shoe shaped (bottom right-hand corner of Figure 1). The speed of traverse of the boat can be varied from several hundredths to six mm per minute. There is a transfer of material to the last zone; therefore, the boat is sloped  $5-7^{\circ}$  to the horizontal. Cooling is carried out in one of the additional heaters but even so cracking of the specimen could still occur. This can be overcome by weakening the boat. Taft did this by decreasing the wall thickness but the present authors produced the same effect by making sectional boats which enables free movement of the silicon specimen. The absence of wetting of quartz by silicon and its high surface tension prevent the silicon from running between the individual sections. Results showed that no transverse cracks occurred in the specimen using this principle. Longitudinal cracks were avoided by cutting all the sections into two parts. In this way a whole specimen without any cracks can be obtained. The sectional boat principle could be applied to other cases. In the present case the

Card2/3

SCV/136-59-3-12/21

Horizontal Zone-melting of Silicon

resistance of silicon increases. The change in electrical resistance along the length of the specimen after five passes is shown in Figure 3. Curve 1 is after zone-melting and Curve 2 after an additional heat treatment at 600 °C for 2 hours. The first zone has much higher resistance than the last.

There are 3 figures and 1 English reference.

Card 3/3

PASHKOVSKIY, M.V. [Pashkova'kyi, M.V.]; LUTSIV, R.V. [Lutsyv, R.V.];  
SAVITSKIY, I.V. [Savyts'kyi, I.V.]

Production of high purity sulphur. Ukr.fiz.zhur. 5 no.3:  
418-420 My-Je '60. (MIRA 13:8)  
(Sulphur)



PASHKOVSKIY, M.V. [Pashkova'kyi, M.V.]; SAVITSKIY, I.V. [Savyts'kyi, I.V.];  
LUTSIV, R.V.

Growing mercury sulfide monocrystals. Ukr. fiz. zhur. 6 no.5:691-  
696 S-0 '61. (MIRA 14:11)

1. L'vovskiy gosudarstvennyy universitet im. Iv.Franko.  
(Mercury sulfide crystals—Growth)

38952

S/181/62/004/007/034/037

B111/B104

24 7700

AUTHORS: Pashkovskiy, M. V., Rybalka, V. V., and Savitskiy, I. V.

TITLE: Conduction processes in single crystals of mercury sulfide

PERIODICAL: Fizika tverdogo tela, v. 4, no. 7, 1962, 1970-1972

TEXT: HgS monocrystals were produced from 99.999% pure Hg and S by vacuum synthesis at 750°C or by sublimation in an atmosphere of N or H<sub>2</sub>S (resistivity at room temperature  $10^9$ - $10^{10}$  ohm.cm, forbidden band width 1.8 ev). Admixtures (< 0.1 percent by weight) of I, Se, Te increased the conductivity by 2-3 orders of magnitude, whereas Cu, Tl impurities decreased it. Monochromatic light irradiation increased conductivity by 2-5 orders of magnitude. The maximum of spectral sensitivity for  $\alpha$ -HgS lies at  $\lambda = 620$  mμ. On cooling toward shorter wavelengths it shifts at a rate of 3 Å/degrees. Adding I, Se, Te, P, Cd, Ag, Cu gives rise to an additional maximum in the infrared region whose position and height depend on the type of impurities and their concentration, respectively. Relaxation of photoconductivity is observed by excitation with light pulses.

Card 1/2

Conduction processes in single ...

S/181/62/004/007/034/037  
B111/B104

Their relaxation curve consists of two distinct sections. The time constant of the first section, which is 30-500  $\mu$  sec, determines the stationary characteristics and is equivalent to the life of the charge carriers of photocurrent. For certain specimens this section includes 70-90% of the whole curve. The second part of the relaxation curve is determined by adhesion processes of nonequilibrium carriers. Its time constant depends to a great extent on the type of admixtures and on their concentration. There are 2 figures.

ASSOCIATION: L'vovskiy gosudarstvennyy universitet im. Iv. Franko  
(L'vov State University imeni Iv. Franko)

SUBMITTED: March 23, 1962

Card 2/2

SAVITSKIY, I. V.

S/058/63/000/003/079/104  
A059/A101

AUTHORS: Pashkovs'kyi, M. V., Rybalka, V. V., Savyts'kyi, I. V.

TITLE: Photoelectric properties of single crystals of  $\alpha$ -HgS

PERIODICAL: Referativnyi zhurnal, Fizika, no. 3, 1963, 79, abstract 3E549  
("Visnyk L'vivs'k. un-tu. Ser. Fiz.", 1962, no. 1(8), 97 - 100,  
Ukrainian)

TEXT: The temperature dependences of the dark current and the photocurrent, the lifetime of the carriers and the spectral distribution of the photocurrent in  $\alpha$ -HgS single crystals, without added impurities and with I, Cu, and Tl impurities, were examined. The activation energies of the impurity levels of these elements are 0.15, 0.45, and 0.3 eV, respectively. The lifetime of the current carriers, determined from the initial section of the drop of photoconductivity, is of the order of 30 to 50  $\mu$ sec. The I impurity increases, and that of Cu and Tl decreases the total inertness of photoconductivity. It is assumed that the I impurity produces levels of adhesion, while the Cu impurity gives rise to recombination centers.

[Abstracter's note: Complete translation]

A. Shneyder

Card 1/1

SAVITSKIY, I. V.

S/058/63/000/003/080/104  
A059/A101

AUTHORS: Savyts'kyi, I. V., Pashkovs'kyi, M. V., Rybalka, V. V.

TITLE: Change in the electric conductivity of  $\alpha$ -HgS by the action of x-irradiation

PERIODICAL: Referativnyi zhurnal, Fizika, no. 3, 1963, 88, abstract 3E609  
("Visnyk L'vivs'k. un-tu. Ser. fiz.", 1962, no. 1(8), 101 - 103, Ukrainian)

TEXT: The dosimetric characteristics of  $\alpha$ -HgS crystals are given which had been obtained by sublimation in a quartz flask at 660°C in a current of nitrogen purified from oxygen. The dark resistance of the samples was  $10^{12}$  -  $10^{13}$  ohms, and changed by some orders due to irradiation. The probe characteristics obtained with an x-ray beam, 0.6 mm in diameter, are given. The authors consider it possible to use  $\alpha$ -HgS single crystals for recording narrow beams of low-intensity x-rays.

Yu. Tkhorik

[Abstracter's note: Complete translation]

Card 1/1

ACCESSION NR: APL014376

S/0300/64/036/001/0014/0021

AUTHOR: Savy\*ts'ky\*y, I. V. (Savitskiy, I. V.); Zelins'ky\*y, V. G. (Zelinskiy, V. G.)

TITLE: Incorporation of radiomethionine in the protein fractions of blood serum under the effect of X-ray irradiation and thiophosphamide radiation

SOURCE: Biokhimichny\*y zhurnal, v. 36, no. 1, 1964, 14-21 Ukrayins'ky\*y

TOPIC TAGS: X-ray, thiophosphamide, serum protein, methionine-S sup 35, gamma-globulin, blood serum, irradiation.

ABSTRACT: The combined effect of X-ray irradiation and thiophosphamide on blood serum proteins and the incorporation of methionine-S<sup>35</sup> in them was studied in experiments on rats. Already within 24 hrs. after irradiation with 600 r the total protein content of blood serum was reduced and the incorporation of methionine-S<sup>35</sup> in all fractions of serum protein increased. Administration of thiophosphamide in a dose of 15 mg/kg reduced to a small extent the protein content of the blood serum. Under the effect of thiophosphamide, the incor-

Card 1/2

ACCESSION NR: AP4014376

poration of methionine into serum proteins was lower vs. that observed on irradiation and higher than that for controls. Combined application of irradiation and thiophosphamide produced changes that differed from those produced by either: the decrease in total protein was the same as after irradiation alone, but the  $\gamma$ -globulin content was reduced to a much greater extent; the incorporation of methionine in all globulin fractions was reduced vs. that occurring on irradiation alone, although the activity of the total protein was higher vs. that for non-irradiated controls. The results obtained indicated that thiophosphamide may to a certain extent counteract the effects of radiation. Furthermore, they corroborated the view that on combined action of radiation and a chemical agent the effects of either may be enhanced or attenuated. Orig. art. has: 2 tables.

ASSOCIATION: Kafedra Biokhimi Odesskogo Meditsinskogo Instituta (Chair of Biochemistry, Odessa Medical Institute)

SUBMITTED: 18May63

DATE ACQ: 14Feb64

ENCL: 00

SUB CODE: BC, NS

NO REF SOV: 009

OTHER: 004

Card 2/2

L 36984-65 EWT(1)/EPA(s)-2/EWT(m)/T/EWP(t)/EEC(b)-2/EWP(b) Pt-10/P1-4  
FJP(c) JD/JG/GG  
ACCESSION NR: AP5007760 S/0192/65/006/001/0166/0168 15  
44  
B

AUTHOR: Kavich, I V.; Savitskiy, I. V.; Il'kiv, G. I

TITLE: Entry of impurities into the crystal lattice of mercuric sulfide

SOURCE: Zhurnal strukturnoy khimii, v. 6, no. 1, 1965, 166-168 21

TOPIC TAGS: mercuric sulfide crystal lattice, crystal parameter, mercuric sulfide impurity, electrical conductivity, acceptor impurity, donor impurity, copper admixture, iodine admixture, solid solution, semiconductor 21

ABSTRACT: The effect of copper and iodine impurities (0.001-1% by wt.) on the parameters of the crystal lattice of HgS was studied by analyzing the roentgenograms and electrical properties. The introduction of a small amount of impurities led to a sharp decrease in the HgS parameters; a further increase in the concentration had a less pronounced effect. Starting with 0.3% iodine, no change in the parameters was observed. It was assumed that these impurities formed limited solid solutions which, depending on the size of the radii, would be a substitution solution for Cu and an addition solution for I<sub>2</sub>. Similar conclusions may be drawn from changes in electrical conductivity, which

Card 1/2



L 36984-65

ACCESSION NR: AP5007760

decreased with small Cu additions and increased with increasing  $I_2$  addition; the resistance of HgS single crystals containing 0.01% Cu was increased by 3 orders of magnitude. This effect was less pronounced in polycrystals. This change in conductivity may be explained by assuming replacement of  $Hg^{++}$  by  $Cu^+$  ions in the lattice, which will cause free holes. The increase in electroconductivity with high Cu concentrations may be related to the formation of a crystalline Cu-S compound with high conductivity at the boundaries. After additions of  $I_2$ ,  $I_2$  replaced S. Thus, univalent metal impurities replacing  $Hg^{++}$  ions are acceptors and increase the conductivity of the  $\alpha$ -HgS. The elements of the Cl subgroup, which are donor impurities, replace the S and increase HgS electroconductivity. Orig. art. has: 4 figures and 2 formulas.

ASSOCIATION: L'vovskiy gosudarstvennyy universitet im. Iv. Franko (L'vov State University)

SUBMITTED: 21May64

ENCL: 00

SUB CODE: IC, SS

NO REF SOV: 004

OTHER: 002

Card

2/2

TRAKHTENBERG, I.M.; SAVITS'KIY, I.V.

Characteristics of active relaxation during dynamic work. Fiziol.  
zhur. (Ukr.) 1 no.1:76-82 Ja-F '55. (MLRA 9:9)

1. Kiivs'kiy medichniy institut imeni akademika O.O.Bogomol'tsya,  
Kafedra gigiyeni pratsi.  
(REST); (FATIGUE) (INHIBITION) (MUSCLES)

TRAKHTENBERG, I.M.; SAVITSKIY, I.V.

Experimental data on Sechenov's phenomenon in dynamic work. Report no.2: Modifications of working capacity following prolonged muscular activity with passive and active intervals [with summary in English]. Biul.eksp.biol. i med. 43 no.1:28-31 Ja '57. (MIRA 10:8)

1. Iz kafedry gigiyeny truda Kiyevskogo meditsinskogo instituta. Predstavlena deystvitel'nyy chlenom AMN SSSR prof. N.N.Gorevym.

(EXERCISE, effects,

working capacity after prolonged musc. activity with passive & active rest periods (Rus))

(REST,

same)

SAVITSKIY, I.V.

Hygienic characteristic of the working conditions in areas where hexachlorobenzene, a new fungicide, has been used. Vrach. delo no.12:1325-1328 D '57. (MIRA 11:2)

1. Kafedra gigiyeny truda (zav. - chlen-korrespondent AMN SSSR, prof. G.Kh.Shakhbazyan) Kiyevskogo meditsinskogo instituta.  
(BENZENE--TOXICOLOGY)

SAVITSKIY I.V.

USSR/Human and Animal Physiology - Physiology of Work and Sport. T-12

Abs Jour : Ref Zhur - Biol., No 7, 1958, 32284

Author : Trakhtenberg, I.M., Savitskiy, I.V.

Inst : -

Title : Experimental Data on the Phenomenon of Sechenov During  
Dynamic Work. Report I. Types of Change of Work Ability  
of Muscles after Passive and Active Interruptions.

Orig Pub : Byul. eksperim. biol. meditsiny, 1956, 42, No 8, 12-15.

Abstract : In conformity with the division of rest after muscular work  
into 4 stages (M.V. Leynik), the authors showed that the  
work ability of the muscles after a two-minute active rest  
changes predominantly according to type V and D, the first  
of which differs by having a higher (in comparison with  
previous work) level of muscular strength, the second -  
by an increase of the intensity of the prefatigue period  
and a decrease of the degree of fatigue. Passive rest  
changed subsequent work according to type A - with an

Card 1/2

USSR/Human and Animal Physiology - Physiology of Work and Sport. T-12

Abs Jour : Ref Zhur - Biol., No 7, 1958, 32284

increase of fatigue, by a decrease of muscle strength and a decrease of the prefatigue period. Completing the remaining stages of rest, which condition the character of subsequent work, requires less time during active interruptions than during passive, which indicates a higher rate of the course of restoring processes during active rest.

Card 2/2

- 157 -

SAVITSKIY, I. V.; TRAKHTENBERG, I. M.; BURYI, V. S.

"Experience of toxicologo-hygienic evalation of some of the  
presently used and newly introduced insectofungicides."

report submitted at the 13th All-Union Congress of Hygienists,  
Epidemiologists and Infectionists, 1959.

SAVITSKIY, I.V., Cond Med Sci --(Misc)" Hygienic and toxicological  
characteristics of new fungicides -- hexachlorobenzene and penta-  
chloronitrobenzene." Kiev, 1959. 30 pp. (Kiev Order of Labor Red  
Banner Med Inst in Acad A.A. Bogomolets), 200 copies  
(U, 27-59, 123)

-71-



TRAKHTENBERG, I.M.; SAVITSKIY, I.V. [Savyts'kyi, I.V.];  
TRINUS, F.P. [Trynus, F.P.]

Analysis of the hypotensive effect during the action of agents  
inactivating SH groups. Fiziol. zhur. [Ukr.] 9 no.6:748-752  
N-D '63. (MIRA 17:8)

1. Kafedra farmakologii i kafedra gigiyeny trudy i professional'-  
nykh zabolevaniy Kiyevskogo meditsinskogo instituta im. akad.  
Bogomol'tsa.

SHAKHBAZIAN, G.Kh.; SAVITSKIY, I.V.

Combined action of thiol poisons and high atmospheric  
temperature on the body. Vest. AMN SSSR 18 no.2:38-42 '63.  
(MIRA 17:5)

1. Kafedra giglyeny truda Kiyevskogo meditsinskogo instituta.

SHAKHBAZYAN, G.L., prof., otv. red.; TRAKHTENBERG, I.M., dots.,  
red.; SAVITSKIY, I.V., kand. med. nauk, red.;  
GABOVICH, R.D., red

[Problems of industrial and agricultural toxicology]  
Voprosy promyshlennoi i sel'skokhoziaistvennoi toksiko-  
logii. Kiev, Zdorov'e, 1964. 197 p. (MIRA 18:2)

1. Kiev. Medychnyi instytut. 2. Chlen-korrespondent  
AMN SSSR (for Shakhbazyan).

SAVITS'KIY, I.V., dotsent

Effect of the central nervous system on the function of the connective tissue. Medych.zhur. 22 no.2:38-46 '52. (MIRA 11:2)

1. Z viddilu eksperimental'noi onkologii (zav. - diysniy chlen AN URSR R.Ye.Kavets'kiy) i viddilu patokhimii (zav. - chlen-kor. AN URSR prof. N.B.Medvedeva) Institutu eksperimental'noi biologii i patologii im. akad. O.O.Bogomol'tsya (direktor - prof. O.O.Bogomol'ts') i kafedri biokhimii Odes'kogo farmatsevtichnogo institutu (direktor - dots. A.G.Trotsenko)  
(SLEEP) (CONNECTIVE TISSUE)